



Promoting equity in physical activity

An evidence summary

FAIR FOUNDATIONS HEALTH EQUITY SERIES



**Acknowledgements:**

This evidence summary was written by Dr Libby Hattersley. It was based on an evidence review commissioned by VicHealth, and conducted and authored by Prof. Kylie Ball, Dr Alison Carver, Dr Michelle Jackson and Katherine Downing from the Centre for Physical Activity and Nutrition Research at Deakin University, in February 2014. The full review is available at www.vichealth.vic.gov.au/fairfoundations.

Both projects were managed by Kerryn O'Rourke, with valuable input from Rayoni Nelson, Leanne Carlon and Candice McKeone.

A peer-reviewed publication of the evidence review is available at <http://heapro.oxfordjournals.org/>

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September 2015 P-EQ-279

Suggested citation:

VicHealth 2015, *Promoting equity in physical activity*, Victorian Health Promotion Foundation.

Contents

4	Introduction
4	Background
5	Using this document
6	What can be done to reduce physical activity and sedentary behaviour-related inequities?
6	Socioeconomic, political and cultural context
8	Daily living conditions
10	Individual health-related factors
12	Priorities for action
13	Priority evidence gaps
14	Bibliography

Introduction

Background

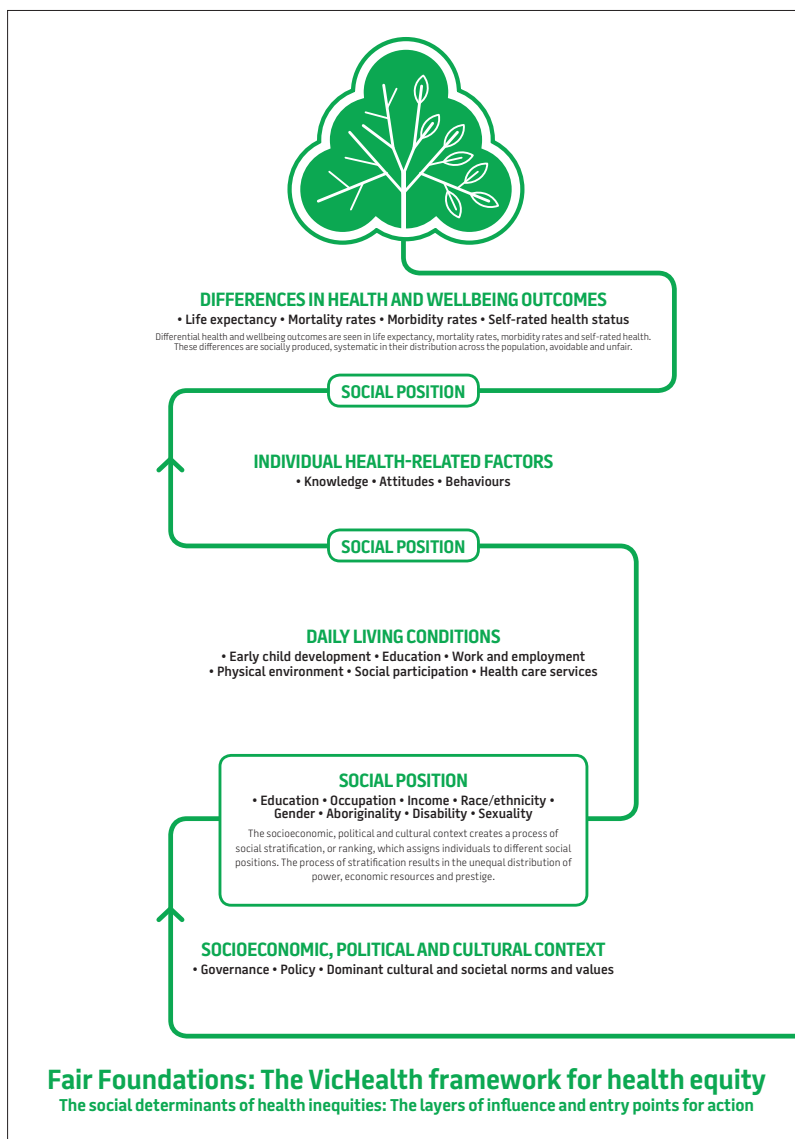
Regular activity is widely recognised as a means to protect against a range of poor health outcomes, including cardiovascular disease, hypertension, type 2 diabetes, osteoporosis, musculoskeletal impairments, obesity, some cancers and poor mental health. Despite the known benefits, however, the majority of Australian adults do not meet physical activity and sedentary behaviour guidelines (Australian Bureau of Statistics, 2013).

Rates of physical inactivity and sedentary lifestyles are not evenly distributed across the population, with particularly strong evidence of a social gradient in leisure time physical activity. At least from early adulthood onwards, Australians with lower levels of education, on lower incomes or living in socioeconomically disadvantaged neighbourhoods are less likely than better-educated and more advantaged Australians to participate in physical activity and more likely to live sedentary lifestyles. Indigenous Australians are significantly less likely to be physically active than non-Indigenous Australians, and women are less active than men throughout the lifespan. Although physical activity is a relatively new field of investigation, there is also emerging evidence of a social gradient in certain sedentary behaviours, including screen time.

Health equity is the notion that all people should have a fair opportunity to attain their full health potential, and that no one should be disadvantaged from achieving this potential if it can be avoided.

Health inequities are differences in health status between population groups that are socially produced, systematic in their unequal distribution across the population, avoidable and unfair.

The social determinants of health inequities are the social determinants of health – or the health-influencing social conditions in which people are born, grow, live, work, play and age – and the social processes that distribute these conditions unequally in society.



www.vichealth.vic.gov.au/fairfoundations

Using this document

This evidence summary is intended to provide policy makers and practitioners in Victoria and across Australia with practical, evidence-based guidance on promoting equity in physical activity. It is designed to be used alongside 'Fair Foundations: The VicHealth framework for health equity' www.vichealth.vic.gov.au/fairfoundations – a planning tool developed and published by VicHealth in 2013 to stimulate and guide action on the social determinants of health inequities.

Common underlying drivers and determinants of health inequities are outlined in the Fair Foundations framework. This evidence summary is one of eight that use the framework to examine a specific health issue and its determinants (mental wellbeing, healthy eating, physical activity, alcohol, and tobacco use), or specific opportunities for action (through social innovation, settings-based approaches, or a focus on early childhood intervention as an upstream solution to health inequities over the life course). In many cases, the key social determinants of health inequities (such as education or employment) are also discussed as settings for action (e.g. schools, workplaces) within each summary.

This summary focuses on approaches that have successfully impacted on, or that have significant potential to address, physical activity and sedentary behaviour-related inequities if designed and targeted appropriately. It focuses on actions to address physical activity and sedentary behaviours through people's leisure time and travel behaviours. Physical activity can also be accumulated incidentally (during everyday living activities), in the workplace and in the home; however, these domains are not covered in detail in the following discussion.

This summary highlights best practice and priorities for action that cut across all three layers of the Fair Foundations framework – Socioeconomic, political and cultural context; Daily living conditions; and Individual health-related factors – in order to support coordinated, multisectoral approaches.

What can be done to reduce physical activity and sedentary behaviour-related inequities?

Socioeconomic, political and cultural context

Governance

Physical activity opportunities are shaped by governance systems that determine the framework for policies, legislation, services and interventions in relation to sport and physical activity promotion, as well as the level of priority and funding that they receive. Governance systems also determine the extent to which various groups in society are able to participate in decision-making processes, and the extent to which they can influence the conditions that affect their daily lives, including opportunities for physical activity.

Collaborative governance, or partnership models, involving coordinated actions from both health and non-health sectors of federal, state and local governments, as well as the engagement of civil society and the private sector, have shown promise for facilitating physical activity in the population. Examples of collaborative statewide approaches to physical activity promotion in Australia include the 1996–2002 New South Wales whole-of-government approach, Be Active WA, the South Australian Premier's Be Active Challenge, Get Moving Tasmania, and the Premier's Active Families Challenge/Active April in Victoria.

Unfortunately, these strategies have not been comprehensively evaluated for their impacts on behaviours. While direct evaluations are challenging – due to their scale and multiple components, and the complexities of assessing against appropriate control sites – the potential effects of these approaches can be indirectly examined via regular physical activity monitoring or surveillance surveys. These should include explicit attention to distributional impacts across a wide range of social groups.

Policy

A broad mix of policies influences physical activity opportunities among different social groups. This mix includes policies governing land use, urban design and neighbourhood development. Mixed residential/commercial neighbourhoods that are safe, aesthetically pleasant and walkable are associated with greater utilitarian walking (e.g. to commute to work or to run errands). Car travel, on the other hand, is more prevalent in areas where there are distinct residential and commercial zones.

Other key policy areas with the potential to impact directly on physical activity participation include transport, education, and sport and recreation. A broad range of social-policy areas, including housing, employment and social welfare, shapes people's everyday living conditions over the life course, and plays an indirect role in providing opportunities for physical activity.

Economic instruments

A range of economic instruments have the potential to address socioeconomic (particularly income-related) inequities in physical activity, including taxes (such as road/congestion taxes), tax exemptions or deductions, subsidised or low-cost council-run facilities, and incentives for private facilities or clubs to offer programs and services that target a broader range of people from different social groups. However, there is a dearth of evidence on the effectiveness and cost-effectiveness of these approaches at the population level, let alone on differential impacts across social groups. This is an area that warrants further research.

Transportation policy

Transportation policies and practices have potential to address inequities in both active transport and leisure time physical activity by preferentially targeting infrastructure improvements, incentives to encourage walking or cycling, or public transport improvements aimed at vulnerable groups. Potentially, this approach could also shift perceived norms about the environment and travel behaviour. Promising approaches in this category include traffic-calming methods; the creation of multi-use trails (walking and cycling); road closures or restrictions on use; road-user charges; cycling infrastructure; and the creation of safe routes to school. However, again, there is a dearth of evidence based on the differential effects of transport policy interventions on physical activity across social groups.

Facility sharing

Policy to support the sharing of government, school and community facilities may enhance opportunities for physical activity in the wider community, and in socioeconomically disadvantaged communities in particular. Opportunities include simplifying the process for facility sharing (e.g. by providing shared-use agreement templates, best-practice models and a standardised costing scheme) and through committed funding to support sport-facility development and upgrades within schools. Evidence is needed on the effectiveness and cost-effectiveness of such initiatives.

Social and cultural norms and values

Australia is strongly identified as a sporting nation, with sport having long been a defining and dominant feature of Australian culture. However, national prevalence rates of inactivity indicate that these norms and values do not translate into physically active lifestyles for many Australians.

In addition, certain social groups may hold different norms relating to physical activity than others. Indigenous Australians, for example, experience unique social, cultural and economic barriers to participation, including negative community norms/perceptions of exercising alone. People living with disabilities can also face social and attitudinal barriers to physical activity, while cultural norms and values are likely to be influencing gender differences in sports participation and physical activity.

Physical activity behaviour may also be linked to social norms at more localised levels, such as simply knowing of, or observing, others being active in the local neighbourhood. However, there is limited empirical evidence on how such variations in norms across social groups might translate into variations in physical activity or sedentary behaviours.

Little is known about the most effective ways to challenge social norms in order to promote more active lifestyles. Community-wide and mass media campaigns, as well as wide-scale transportation policy changes, may help to shift social norms, given their high visibility and potential to involve large proportions of the population. These strategies are also likely to reflect and influence the other two layers of the Fair Foundations framework, through making changes to daily conditions where physical activity can occur, and through increasing knowledge, awareness and attitudes related to physical activity.

Strategies to incentivise the increased representation of women on sporting boards, having more women in policy-making positions in sporting and media organisations, and using media promotion of influential role models to increase opportunities for women may also offer potential for challenging gender norms relating to physical activity and female participation in sport. However, there is a dearth of empirical evidence available on the effectiveness or cost-effectiveness of such approaches, nor have their differential impacts across social groups been subject to detailed research.

On the whole, mass media campaigns delivered alone are unlikely to be effective in promoting increased physical activity. They may, however, play a role in promoting increased self-efficacy and/or knowledge/attitudes related to physical activity, as well as helping to shift social norms, and such influences do not seem overly to favour more advantaged groups.

Community-wide campaigns tend to be resource-intensive and expensive, but appear to be effective in increasing the proportion of people who are physically active. Community-wide campaigns are typically large-scale, highly visible multicomponent campaigns involving multiple sectors and partnerships that deliver messages via television, radio, newspapers and other media. Unlike mass media campaigns, these campaigns also include other components, such as community events; support groups; physical activity counselling; and risk-factor screening and education at worksites, schools and community health centres. They can also include policy and environmental changes, such as the creation of new walking paths or the opening of school facilities for public use. Campaign messages can be tailored to fit the needs of specific populations such as disadvantaged social groups. They can also be targeted specifically at challenging and shifting gender-related norms and stereotypes around sport and physical activity. However, their effectiveness in increasing physical activity among disadvantaged groups is much less well studied, and evidence for impacts among these groups is less consistent.

Daily living conditions

Key determinants within the daily living environment that can influence participation in physical activity and sedentary behaviours include access to physical activity opportunities within schools, workplaces and other key settings, and availability of social support for activity from family, friends, peers or health professionals.

No published physical activity-related evaluations have explicitly sought to redress the social determinants of health inequities at this level. However, a number of interventions have focused on early childhood and education settings, workplaces, community and other settings at this layer in order to promote physical activity and/or reduce sedentary behaviours. The majority of these settings-based initiatives have been multicomponent approaches, typically combining environmental and social support with individually targeted education and health promotion strategies. While these have shown promise, it is difficult to determine exactly which component(s) lead(s) to any reported behaviour changes.

Early childhood and education

Physical education or sport is mandated in Australian schools and funded by the government. Hence, all children attending school, regardless of social position or characteristics, are exposed to at least some level of physical activity. However, social differences in physical activity and sports participation begin to emerge by adolescence – a time when many Australian young people leave the only structured forms of physical activity and sport in which they participate. At this point, other intrinsic or extrinsic factors, including social factors and their determinants, may become more important predictors of participation.

Early childhood settings

Centre-based early childhood settings, such as preschools and childcare centres, represent a promising setting for physical activity promotion because they provide access to a large proportion of preschool-aged children (3–5 years). However, to date there is little evidence of the effectiveness of interventions in these settings. Parental involvement appears to be important, and perhaps vital, for bringing about lasting changes in physical activity or sedentary behaviours in young children.

School settings

Again, given their broad reach to students across all social groups, schools are a promising setting for addressing social inequities in physical activity participation. School-based physical education (PE) interventions aimed at increasing the amount of time children are active at school have been shown to be effective for increasing physical activity and fitness among children across a range of social groups and in diverse settings.

These interventions may involve policy or curriculum changes, additional PE classes or longer class time allocated for PE, and/or enhanced teacher training. School environment strategies, including use of travel coordinators to develop travel plans and safe routes to school, walking school buses and one-off events such as ‘Walk Safely to School’ may also increase active transport to school. School-based interventions tend to be more effective if they are targeted at specific barriers to physical activity, including active transport, and are multisetting in scope (involving parents, schools and local communities).

Schools can also potentially play a role in addressing gender gaps in physical activity by encouraging girls to participate in physical activity while at school, improving the physical and cultural safety of spaces for physical activity, and working with disadvantaged girls and women to remove barriers to their physical activity.

Employment and working conditions

Occupation-related physical activity can have a significant impact on daily activity levels due to the large amounts of time many individuals spend at work. Physical activity levels vary significantly by occupation, and there is a well-established link between occupation and socioeconomic status (SES). In general, individuals with a lower SES are more likely to hold jobs that involve a relatively high level of occupational activity. However, high levels of occupational activity are also associated with lower levels of leisure time physical activity and higher levels of sedentary behaviours.

Overall, occupational physical activity levels have declined over recent decades, largely as a result of advances in manufacturing, robotics and heavy equipment, and the rise of computer-based work. This has led to increasingly more automated workplaces in a number of previously high-activity occupations, including warehousing, transport and distribution, and the trades. Sedentary behaviours, particularly sitting for prolonged periods, are a particularly important concern in office environments and desk-based jobs.

The extent to which workplaces act as enablers for, or barriers to, physical activity can also vary by occupational group. Inequities in the availability of workplace cultures, policies and facilities conducive to physical activity, in access to workplace wellness programs and in levels of organisational- and management-level support for such programs across occupational groups are likely to contribute to inequities in physical activity levels.

Workplaces offer a potential setting for promoting active lifestyles and for reducing sedentary behaviours, particularly sitting. Four key approaches have shown promise in reducing workplace sitting: increasing the number of breaks from sitting time; implementing strategies around postural change; focusing on ergonomic changes to individual workspaces; and altering the built design of the broader workplace. However, all studies to date have focused on office workers. Few studies, moreover, have used valid measures of physical activity/sedentary outcomes, and there is no evidence for the effectiveness of these strategies across social groups. Particular caution is required to ensure that workplace interventions do not exacerbate inequities.

Physical environment

A large body of observational evidence attests to correlations between physical activity and features of the neighbourhood environment. Urban-design quality, transportation patterns, proximity of facilities, neighbourhood density, street connectivity, perceived safety, and availability of cyclist- and pedestrian-friendly amenities (including sidewalks and pedestrian crossings), as well as many other aspects of the physical environment, can all affect leisure time and transport-related physical activity levels.

Inequalities in urban design may contribute to disparities in physical activity by SES, as well as by ethnicity. However, urban-design quality appears to be associated in complex ways with neighbourhood-level socioeconomic disadvantage, attesting to the importance both of context-specific research and of not generalising and applying to the Victorian context findings from other countries or even from other states and localities.

There appears to be little variation in the number of playgrounds or leisure facilities according to neighbourhood-level SES in Australia. However, clear disparities exist in the quality of sports and recreational facilities, including public open spaces. Public open spaces in high SES neighbourhoods tend to be of higher quality than those in low SES neighbourhoods in terms of amenities and aesthetics (such as picnic areas, availability of shade, water features, and walking and cycling paths). In addition, low SES areas are less likely than high SES areas to have well-maintained sports facilities or to have a volunteer base to run or support sports programs or clubs.

Despite the body of observational evidence attesting to the importance of the built environment for activity, interventions aimed at effecting environmental change are relatively sparse. It is logistically, financially and politically challenging to bring about large-scale environmental change. Political and public support, along with a substantial investment in public infrastructure, are required. Public health gains may not emerge for many years, and it is difficult rigorously to evaluate the impact of specific strategies.

The majority of evidence in this area is derived from observational studies and natural experiments. This evidence shows that more active lifestyles can be supported by policies and programs to increase or enhance public open space/green space, to establish or improve footpaths or lighting, to create or refurbish playgrounds, to encourage mixed land use, to improve public transport, pedestrian and cycling infrastructure in communities, and to build and/or enhance access to existing exercise facilities. These approaches can be applied in settings or communities with a high proportion of socially disadvantaged individuals, and can be combined with informational outreach activities aimed at changing individual behaviours (such as education and training, risk-factor screening, and support or buddy systems). However, there is little evidence of cost-effectiveness and little empirical evidence regarding the differential effects of various strategies across social groups.

Social participation

Lack of support or encouragement for active lifestyles, particularly from friends and family, is known to be a key barrier to physical activity participation, while lack of civic and social engagement is associated with a range of health-related behaviours, including physical activity and sedentary behaviours.

Peer-based interventions, such as social-support groups, can increase physical activity, and constitute a relatively simple intervention approach – requiring minimal resources – that can be implemented in a range of settings (including schools, workplaces and communities). This approach shows particular promise and salience among disadvantaged groups, providing that the approach is appropriately tailored to local needs.

Promising strategies include fostering new, or strengthening existing, social networks to provide supportive relationships for physical activity behaviour change; setting up a ‘buddy’ system; making ‘contracts’ with others to be active; engaging in peer or professional coaching; participating in walking or other groups that provide companionship and support while being physically active; and establishing discussion groups to share support and help address barriers to participation. Participants can be connected with other participants and program staff members to monitor progress and receive encouragement.

Health care services

Health care services have an important role to play in promoting and supporting active lifestyles due to the wide cross-section of the population with which they have contact. However, inequities in physical and economic access to these services, and perceived barriers to their use (including fear of stigma or discrimination) can act as impediments to service utilisation. Of critical importance is the capacity of health care personnel to understand and address the social determinants of physical inactivity and sedentary behaviours in different social groups.

Potentially promising strategies in health care settings include provision of education, lifestyle counselling, individually tailored activity programs, goal setting and follow-up support. Primary-care patients can also be linked to community-based activity programs and facilities. Minimal contact interventions, such as health checks or single-visit counselling, have typically not been effective, but more intensive approaches supported by targeted information, follow-up support, and coordination with other stakeholders such as community sports organisations or ongoing mass media campaigns, have shown positive effects on physical activity participation. However, the effectiveness of interventions conducted through health care settings among different social groups is not well established.

Individual health-related factors

Individual-level factors shaping physical activity and sedentary behaviour levels include motivation, self-efficacy, perceived barriers (such as cost or lack of time), and physical activity history and skills. Social and attitudinal barriers – that is, norms relating to the abilities of people to participate in activity – often prove the most difficult to overcome.

When conducted alone, individually focused interventions may maintain or even exacerbate social inequities in physical activity participation. However, when implemented as part of a multilevel approach, and complemented by broader social and environmental supports, individual-level strategies can help to address the intrapersonal determinants of physical activity among socially disadvantaged individuals, at least in the short term.

Motivation-based interventions

Motivational interviewing/counselling has been suggested as an effective approach for increasing physical activity and improving its psychosocial determinants among participants of low SES. However, there is mixed evidence for its effectiveness in disadvantaged groups. Counselling and motivational support can be delivered by health care workers or other trained personnel in a range of settings, or via telephone, text messaging or the internet, and can be combined with the provision of pedometers to increase motivation for physical activity. Pedometers are an affordable and accessible technology that may offer potential to increase motivation, particularly among socially disadvantaged groups; however, this is yet to be assessed.

Cognitive behavioural approaches

Cognitive behavioural interventions typically involve behaviour-change strategies such as intention formation, goal setting, self-monitoring of behaviour or outcomes (e.g. body weight), addressing barriers and relapse prevention. They can be delivered face-to-face in a range of settings (including homes; sports clubs, health and fitness settings, faith-based organisations, or other community settings; workplaces; and schools) or via various media (such as print, telephone, mass media or web-based/novel technologies). Cognitive behavioural approaches have shown some success in improving self-efficacy and/or knowledge and attitudes relating to physical activity, and, in some cases, increasing physical activity levels among socially disadvantaged groups. These approaches are more likely to be successful if they are theoretically grounded, and tailored to an individual's specific physical activity preferences, barriers, social contexts and readiness for change.

Point-of-decision prompts

Informational prompts can be introduced in a range of settings, including shopping malls, train and bus stations, airports, office buildings and health care settings; signs posted to encourage people to choose to use stairs instead of escalators or lifts, and to encourage physical activity in general. Point-of-decision prompts appear equally effective for promoting physical activity among men and women, across ethnic minority groups (as long as they are appropriately tailored) and in a range of different settings. However, these approaches may not be effective for people with a disability that precludes or restricts stair use.

Priorities for action

Priorities for all actions seeking to address health inequities:

- Coordinate a blend of measures across all three layers of the Fair Foundations framework, with particular emphasis on, and investment in, the lower two layers to rebalance the current emphasis on individual-level health factors.
- Seek to address both inequities in health outcomes and the wider social determinants of these inequities.
- Incorporate explicit equity objectives.
- Apply principles of proportionate universalism: interventions should be universal, but the level of support should be proportionate to need.
- Ensure that targeted supports do not stigmatise particular groups.
- Promote active and meaningful engagement of a wide range of stakeholders, and increase the diversity of representation at all stages of development and implementation.
- Conduct a thorough assessment of the needs, assets, preferences and priorities of target communities.
- Allocate adequate, dedicated capacity and resources to ensure sufficient intensity and sustainability.
- Monitor and evaluate differential impacts across a range of social indicators to ensure that they achieve their objectives without doing any harm, as well as to strengthen the evidence base for future interventions.
- Invest in equity-focused training and capacity building in both health and non-health sectors, from front-line staff to policy and program decision-makers.
- Make strategies flexible and adaptable at the local level.

Priorities for action within each layer of the Fair Foundations framework:

Socioeconomic, political and cultural context

- Provide support and incentives for local and state governments, as well as community organisations, to develop policies and practices to promote physical activity programs in socioeconomically disadvantaged communities using existing infrastructure (e.g. active parks programs and walking groups) and reaching individuals across the life course.
- Continue to invest in physical education to ensure that all schools, including those with a high proportion of disadvantaged students, engage students in at least mandated levels of quality physical education.

Daily living conditions

- Create or enhance access to places for physical activity, including walking paths, parks, recreational facilities and shared-use facilities among all community members, with a focus on disadvantaged neighbourhoods.
- Combine changes to the physical environment with informational outreach activities (such as education, and support or buddy systems), and ensure that they are available and physically, economically and socially accessible to disadvantaged groups, including people living with disabilities.
- Consider peer- or group-based physical activity and/or social-support programs that address barriers to physical activity among disadvantaged groups.
- Consider delivering intensive, individually tailored approaches in primary health care settings, supported by targeted information, follow-up support, and coordination with other stakeholders such as community sports organisations or ongoing mass media campaigns.

Individual health-related factors

- Implement tailored motivational, cognitive-behavioural and/or mediated individual-level approaches for promoting physical activity as part of a multilevel approach, complemented by broader social and environmental supports.
- Consider using internet and mobile technologies to create tailored, flexible, interactive physical activity programs that meet the specific requirements of the individual user.

Priority evidence gaps

- The nature and magnitude of social inequities in physical activity and sedentary behaviours related to disability, ethnicity and Aboriginality.
- The nature and magnitude of social inequalities in transport-related physical activity.
- When and why socioeconomic inequities in physical activity and sedentary behaviours emerge during childhood/adolescence.
- How social norms contribute to variations in physical activity or sedentary behaviours across social groups, and the most effective ways to challenge these norms.
- Differential impact of physical activity and sedentary behaviour interventions across social groups.
- The impact of economic approaches to reducing social inequities in physical activity and sedentary behaviours (such as road and congestion taxes, tax deductions, and incentives for retailers and recreation facilities).
- The impact of new urban-planning or transport policies, or changes to the physical environment, on physical activity levels across social groups.
- Best practice for equitable physical activity promotion that is inclusive of people with disabilities.
- Effective approaches to reducing screen time and other sedentary behaviours equitably in the general population and across social groups.
- The nature of public perceptions and support for physical activity-related environmental or policy change in Australia.
- The effectiveness of interventions conducted through Health care settings among different social groups.
- The effectiveness of individually focused web- and mobile-based interventions for influencing physical activity in different social groups.
- Cost-effectiveness of intervention approaches.

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Victorian Health Promotion Foundation
PO Box 154 Carlton South
Victoria 3053 Australia
T +61 3 9667 1333 F +61 3 9667 1375

vichealth@vichealth.vic.gov.au
vichealth.vic.gov.au
twitter.com/vichealth
facebook.com/vichealth

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September 2015 P-EQ-279

VicHealth acknowledges
the support of the
Victorian Government.

